

SMALL SCALE COMPOUND ISOLATION USING MASS DIRECTED PURIFICATION

Eric S.E. van Beelen, Jo-Ann M. Jablonski and Andrew J. Aubin

Waters Corporation, 34 Maple Street, Milford, MA 01757

Compound isolation in medicinal chemistry is often needed to understand reactions and investigate the nature of formed by products. Small-scale compound isolation can speed up this process. Here we show the principles of such a device – coupled to a standard UPLC-UV-MS instrument for reaction monitoring. The small-scale compound isolation produces collections with very small volumes, which can make subsequent fraction handling and processing challenging. However the here described instrument (WFM-A), minimizes peak dispersion during collection and can be configured to perform fraction pooling to increase the overall yield.

In this study we show an example for peptide purification where we can fractionate and isolate successfully the target peptide and its related impurities present.

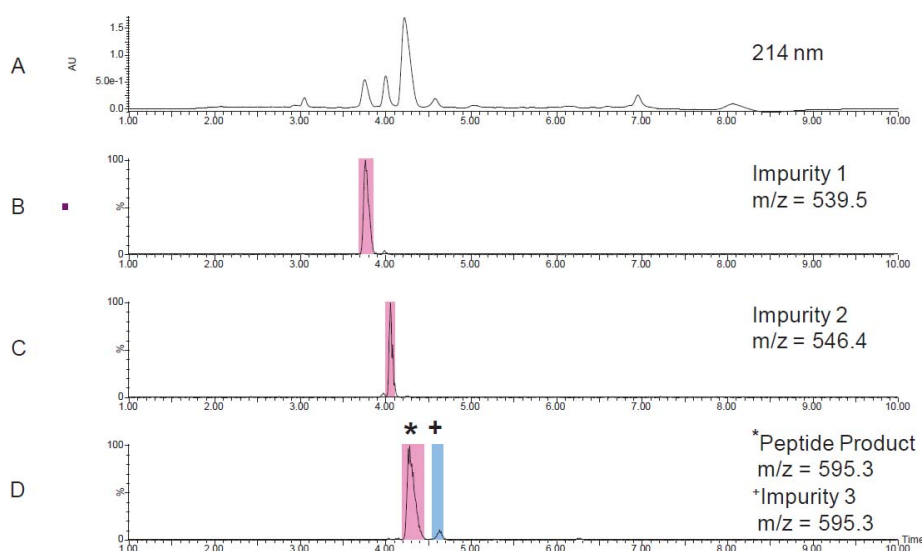


Figure 4. Mass-directed isolation of the target peptide and its related impurities; 28-31%B in 3.4 min; 0.41% change per column volume; peptide concentration, 5.4 mg/mL; Inj. Vol. 3 μ L.